

WHAT IS CLAIMED IS:

1 1. In a data communication system including a wireless subsystem for the transmission
2 of data packets between a server and a wireless handset having a voice/data capability
3 selectable between first and second operating modes, a method of selecting the operating
4 mode of the handset after wireless communication is established between the handset and the
5 subsystem, which comprises the steps of:

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7 associating, with the system, a data base containing data indicative of the operating
8 mode capability of the subsystem;

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10 transmitting query messages on the system from the handset to the data base to retrieve
11 such capability data; and

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13 operating the handset in the second mode if the retrieved capability data indicates that
14 the subsystem is capable of operation in the second mode.

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16 2. In a data communication system for transmitting data packets between a server and
17 a wireless handset having a voice/data capability selectable between first and second operating
18 modes, the system comprising, in combination, first and second wireless subsystems coupled
19 to the server, the first subsystem being operable in the first mode, the handset being initially
20 in wireless communication with the first subsystem in the first mode, a method of selecting
21 the operating mode of the handset in connection with a handoff of the handset from the first
22 subsystem to the second subsystem, which comprises the steps of:

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24 associating, with the system, a data base containing data indicative of the operating
25 mode capability of the second subsystem;

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27 transmitting query messages on the system from the handset to the data base after
28 execution of the handoff to retrieve such capability data; and

14 switching the handset into the second mode if the retrieved capability data indicates
15 that the second subsystem is capable of operation in the second mode.

1 3. A method as defined in claim 2, in which the query messages contain information
2 identifying the subsystem to which the handset is then connected.

1 4. A method as defined in claim 3, in which the query messages further contain
2 information identifying the current specific latitude-longitude location of the handset.

1 5. In a data communication system for transmitting data packets between a server and
2 a wireless handset having a voice/data capability selectable between first and second operating
3 modes, the system comprising, in combination, first and second base stations coupled to the
4 server, the first base station being operable in the first mode, the handset being initially in
5 wireless communication with the first base station in the first mode, a method of selecting the
6 operating mode of the handset in connection with a handoff of the handset from the first base
7 station to the second base station, which comprises the steps of:

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9 associating, with the system, a data base containing data indicative of the operating
10 mode capability of the second base station;

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12 transmitting query messages on the system from the handset to the data base after
13 execution of the handoff to retrieve such capability data; and

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15 switching the handset into the second mode if the retrieved capability data indicates
16 that the second base station is capable of operation in the second mode.

1 6. In a data communication system for transmitting data packets between a wireless
2 handset having a voice/data capability selectable between first and second operating modes
3 and a server designated as a first Internet destination port for the handset, the system
4 comprising, in combination, first and second wireless subsystems coupled to the server

5 through the Internet, the first subsystem being operable in the first mode, the handset being
6 initially in wireless communication with the first subsystem in the first mode, a method of
7 selecting the operating mode of the handset in connection with a handoff of the handset from
8 the first subsystem to the second subsystem, which comprises the steps of:

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10 associating, with the system, a data base containing data indicative of the operating
11 mode capability of the second subsystem;

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13 transmitting query messages on the system from the handset to the data base after
14 execution of the handoff to retrieve such capability data; and

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16 switching the handset into the second mode if the retrieved capability data indicates
17 that the second subsystem is capable of operation in the second mode.

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19 7. A method as defined in claim 6, in which the associating step comprises
20 designating the data base as a second Internet destination port for the handset.

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22 8. A method as defined in claim 6, in which the data base further contains
23 configuration data useful for efficient radio communication between the handset and the
24 second subsystem in the second mode.

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26 9. In a data communication system for transmitting data packets between a server and
27 wireless handset having a voice/data capability selectable between first and second operating
28 modes, the system comprising, in combination, a first wireless subsystem including a first
29 base station coupled to the server through the Internet and operable in the first mode, and a
30 second wireless subsystem including second and third base stations coupled to the server
31 through the Internet, the second base station being operable in the first mode, the handset
32 being initially in wireless communication with the first base station in the first mode, a
33 method of selecting the operating mode of the handset in connection with a handoff of the
34 handset from the first base station to the second base station, which comprises the steps of:

10 associating, with the system, a data base containing data indicative of the operating
11 mode capability of the third base station;
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13 transmitting query messages on the system from the handset to the data base over the
14 second base station after the handoff to retrieve such capability data;
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16 switching the handset into the second mode if the retrieved capability data indicates
17 that the third base station is capable of operation in the second mode; and
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19 establishing wireless communication between the handset and the third base station
20 when the operating mode of the handset is switched.

10 10. In a data communication system for transmitting data packets between a wireless
handset having a voice/data capability selectable between first and second operating modes
and a server designated as a first Internet destination port for the handset, the system
comprising, in combination, a first wireless subsystem including a first base station coupled
to the server through the Internet and operable in the first mode, and a second wireless
subsystem including second and third base stations coupled to the server through the Internet,
the second base station being operable in the first mode, the handset being initially in wireless
communication with the first base station in the first mode, a method of selecting the
operating mode of the handset in connection with a handoff of the handset from the first base
station to the second base station, which comprises the steps of:

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12 associating, with the system, a data base containing data indicative of the operating
13 mode capability of the third base station;
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15 transmitting query messages on the system from the handset to the data base over the
16 second base station after the handoff to retrieve such capability data;
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switching the handset into the second mode if the retrieved capability data indicates that the third base station is capable of operation in the second mode; and
establishing wireless communication between the handset and the third base station when the operating mode of the handset is switched.

11. A method as defined in claim 10, in which the associating step comprises designating the data base as a second Internet destination port for the handset.

12. In a wireless handset operable in a selectable one of first and second voice/data modes for exchanging data packets with a remote machine through a data communication system, the system comprising, in combination, a first wireless subsystem coupled to the remote machine and operable in the first mode, a second wireless subsystem coupled to the remote machine, and a data base associated with the system and containing data indicative of the operating mode capability of the second subsystem, the handset being initially in radio communication with the first subsystem in the first mode, the handset being switchable into radio communication with the second subsystem in response to the execution of a handoff of the handset from the first subsystem to the second subsystem:

means responsive to the execution of the handoff for generating a capability data request to be transmitted to the data base through the first subsystem to retrieve the capability data; and

means responsive to the retrieved capability data for switching the handset from the first mode to the second mode if the retrieved capability data indicates that the second subsystem is capable of operation in the second mode.

13. In a data communication system for transmitting data packets between a server and a wireless handset operable in a selectable one of first and second voice/data modes, the system comprising, in combination, a first wireless subsystem coupled to the server and

operable in the first mode, and a second wireless subsystem coupled to the server, the handset being initially in radio communication with the first subsystem in the first mode, the handset being switchable into radio communication with the second subsystem in response to the execution of a handoff of the handset from the first subsystem to the second subsystem:

a data base associated with the system and containing data indicative of the operating mode capability of the second subsystem;

means associated with the handset and operative in the event of a handoff of the handset from the first subsystem to the second subsystem for interrogating the data base over the system to retrieve the capability data; and

means associated with the handset and responsive to the retrieved capability data for operating the handset in the second mode after such handoff if the retrieved capability data indicates that the second subsystem is capable of operation in the second mode.

14. In a data communication system for the transmission of data packets between a server and a wireless handset having a voice/data capability selectable between first and second modes, the system comprising a base station coupled to the server and in radio communication with the wireless handset:

a data base associated with the system and containing data indicative of the operating mode capability of the base station;

means associated with the handset for transmitting query messages on the system from the handset to the data base to retrieve such capability data; and

means responsive to the retrieved capability data for operating the handset in the second mode if the retrieved capability data indicates that the base station is capable of operation in the second mode.

1 15. In a data communication system for transmitting data packets between a server and
2 a wireless handset operable in a selectable one of first and second voice/data modes, the
3 system comprising first and second base stations coupled to the server, the first base station
4 being operable in the first mode, the handset being in initial wireless communication with the
5 first base station and switchable into wireless communication with the second base station
6 when handed off to the second base station:

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8 a data base associated with the system and containing data indicative of the operating
9 mode capability of the second base station;

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11 means associated with the handset and operative in the event of a handoff of the
12 handset from the first base station to the second base station for interrogating the data
13 base over the system to retrieve the capability data; and

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15 means associated with the handset and responsive to the retrieved capability data for
16 operating the handset in the second mode after such handoff if the retrieved capability
17 data indicates that the second base station is capable of operation in the second mode.

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19 16. In a data communication system for transmitting data packets between a first
20 server and a wireless handset operable in a selectable one of first and second voice/data
21 modes, the system comprising first and second wireless subsystems coupled to the first server,
22 the first subsystem being operable in the first mode, the handset being in initial wireless
23 communication with the first subsystem and switchable into wireless communication with the
24 second subsystem when handed off to the second subsystem:

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26 a second server associated with the system;

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28 a data base incorporated in the second server and containing data indicative of the
29 operating mode capability of the second subsystem;

means associated with the handset and operative in the event of a handoff of the handset from the first subsystem to the second subsystem for interrogating the data base over the system to retrieve the capability data; and

means associated with the handset and responsive to the retrieved capability data for operating the handset in the second mode after such handoff if the retrieved capability data indicates that the second subsystem is capable of operation in the second mode.

17. A system as defined in claim 16, in which the first and second servers are designated as first and second Internet destination ports, respectively, for the handset.

18. A system as defined in claim 16, in which the data base further contains configuration data useful for efficient radio communication between the handset and the second subsystem in the second mode.

19. In a data communication system for transmitting data packets between a wireless handset having a voice/data capability selectable between first and second operating modes and a server designated as a first Internet destination port for the handset, the system comprising, in combination, a first wireless subsystem including a first base station coupled to the server through the Internet and operable in the first mode, and a second wireless subsystem including second and third base stations coupled to the server through the Internet, the second base station being operable in the first mode, the handset being initially in wireless communication with the first base station in the first mode and switchable into wireless communication with the second base station when handed off from the first base station to the second base station:

a data base associated with the system and containing data indicative of the operating mode capability of the third base station;

means associated with the handset and operative after execution of a handoff of the handset from the first base station to the second base station for interrogating the data base over the second base station to retrieve the capability data;

means associated with the handset and responsive to the retrieved capability data for operating the handset in the second mode if the retrieved capability data indicates that the third base station is capable of operation in the second mode; and

means coupled to the operating means and effective when the handset is operated in the second mode for establishing wireless communication between the handset and the third base station.

20. A system as defined in claim 19, in which the data base is designated as a second Internet destination port for the handset.

21. In a data communication system for transmitting data packets between a wireless handset having a voice/data capability selectable between first and second operating modes and a first server designated as a first Internet destination port for the handset, the system comprising, in combination, a first wireless subsystem including a first base station coupled to the first server through the Internet and operable in the first mode, and a second wireless subsystem including second and third base stations coupled to the first server through the Internet, the second base station being operable in the first mode, the handset being initially in wireless communication with the first base station in the first mode and switchable into wireless communication with the second base station when handed off from the first base station to the second base station:

a second server associated with the system;

a data base incorporated in the second server and containing data indicative of the operating mode capability of the third base station;

16 means associated with the handset and operative after execution of a handoff of the
17 handset from the first base station to the second base station for interrogating the data
18 base over the second base station to retrieve the capability data;
19
20 means associated with the handset and responsive to the retrieved capability data for
21 operating the handset in the second mode if the retrieved capability data indicates that
22 the third base station is capable of operation in the second mode; and
23
24 means coupled to the operating means and effective when the handset is operated in
25 the second mode for establishing wireless communication between the handset and the
26 third base station.

1 22. A system as defined in claim 21, in which the second server is designated as a
2 second Internet destination port for the handset.